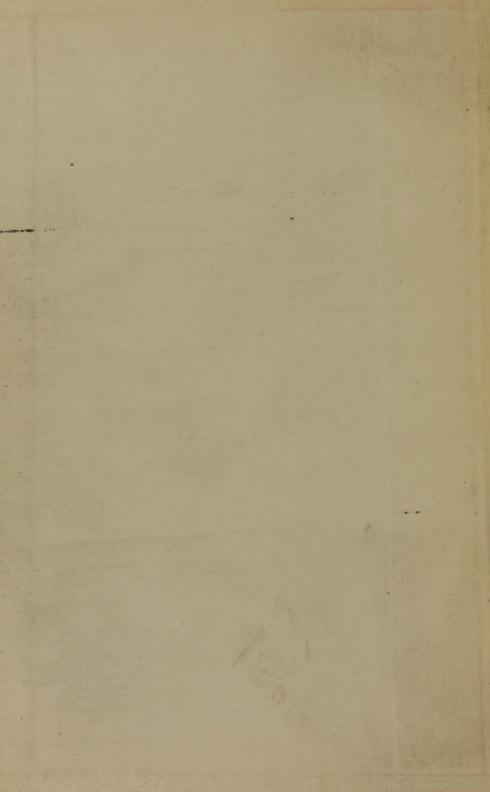
LIST OF SKELETONS & CRANIA

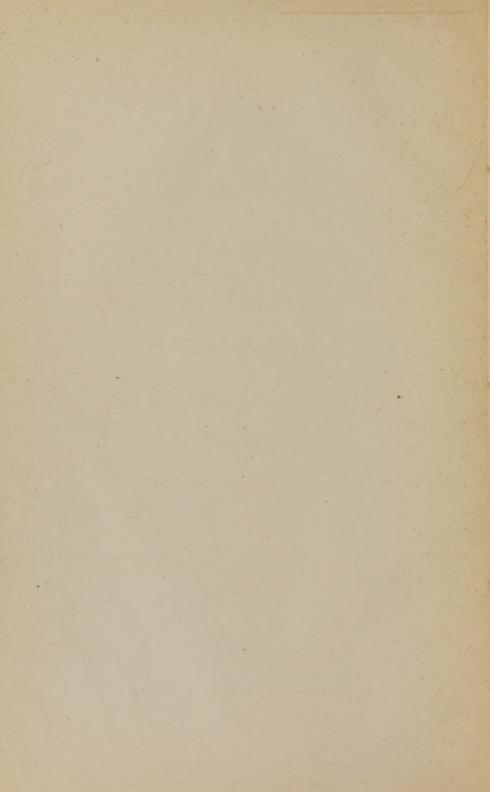
IN THE SECTION OF COMPARATIVE ANATOMY.

ARMY MEDICAL MUSEUM.



Army Medical Museum.







SECTION OF COMPARATIVE ANATOMY

OF THE

UNITED STATES ARMY MEDICAL MUSEUM,

FOR USE DURING THE

INTERNATIONAL EXHIBITION OF 1876

IN CONNECTION WITH THE

REPRESENTATION OF THE MEDICAL DEPARTMENT U.S. ARMY.

ARMY MEDICAL MUSEUM, WASHINGTON, D. C. 1876.

PHILADELPHIA:
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ADVERTISEMENT.

This list of the skeletons and crania in the Section of Comparative Anatomy of the United States Army Medical Museum was prepared by Dr. H. C. Yarrow, and is intended for distribution, during the Centennial Exhibition, among naturalists and others interested in comparative anatomy, for the purpose of showing the deficiencies of our collection, and soliciting contributions.

This collection constitutes one section of the Army Medical Museum, which, at present, is divided into six sections, as follows:—

In charge of Assistant Surgeon G. A. Otis, U. S. A., Curator,

In charge of Assistant Surgeon J. J. WOODWARD, U.S. A :--

The Army Medical Museum was created primarily for the purpose of preserving specimens illustrative of the wounds and diseases which produce death and disability during war, with the view of thereby facilitating the study of methods for diminishing mortality and alleviating suffering among soldiers. It is now the desire of the Surgeon General that, so far as the means placed at his disposal will permit, the collection shall be extended so as to embrace all forms of injuries and disease, so that it shall eventually become a general Pathological Museum, accessible for study to all medical men who are prosecuting original inquiries. Of the great usefulness of such a collection, it is unnecessary here to speak, or to point out how vain all hopes have proved that any large collection of this kind can be created except with the aid

and support of government. A cabinet of comparative anatomy furnishes the means for useful collateral studies, subordinate to the general purposes of a Pathological Museum: hence, such cabinets are found in connection with most of the great Pathological Collections of Europe, and one has been commenced at the Army Medical Museum.

The appropriations for the support of the Museum have been hitherto too limited to permit the expenditure of any considerable sum on the collection of comparative anatomy. The specimens enumerated in the following list were for the most part collected by medical and other officers of the army on duty at frontier posts. For the present, any increase of the collection can only be expected from such donations, which will thankfully be received from army officers or others, or from exchanges of duplicate specimens, which, however, as yet are only possible to a very limited extent.

Specimens presented need not be thoroughly cleaned and mounted. This laborious work is done in the Museum by Dr. F. Schafhirt, by whom the greater part of the specimens enumerated in the following list were prepared. It will be sufficient, in the case of large skeletons or crania, if the flesh is roughly dissected from bone and the viscera, brain, &c., removed. The preparation thus prepared can be packed in a mixture of sawdust and salt, or simply dried, for transportation. Small animals are best preserved in alcohol, in which case an incision should be made along the middle line of the abdomen to give the alcohol access to the viscera.

J. J. WOODWARD,

Assistant Surgeon U. S. A.

In charge of the Medical, Microscopical, and Comparative Anatomy Sections, Army Medical Museum. and of

The Representation of the Medical Department U. S. Army, at the International Exhibition.

LIST OF CRANIA AND SKELETONS OF NORTH AMERICAN MAMMALS.

Note.-In the preparation of this list the classification adopted is substantially the same as that of Dr. Theo. Gill in his paper entitled "Arrangement of the Families of Mammals," Smithsonian Miscellaneous Collections, No. 230, 1872, and the nomenclature of the species is in accordance, for the most part, with the more recent views of prominent American Mammalogists.

CLASS MAMMALIA.

Sub-Class Placentalia.

SUPER-ORDER EDUCABILIA.

ORDER Feræ.

SUB-ORDER FISSIPEDIA.

Family Felidæ: Cats, etc.

Sub-Family Felinæ: Typical Cats.

Skel. Lynx rufus (Guldenstädt), Raf. Cran. 952.

1059, 1160.

1383.

Lynx rufus maculatus, Cs. and Yar. Texas Wild Cat. Cran. Skel.

10, 80. 793.

Cran. Skel. Lynx rufus fasciatus, Cs. and Yar. Red Cat.

1396.

Lynx canadensis (Geoff and Desm.), Raf. Canada Lynx. Skel. Cran. 180.

Felis concolor, Linn. Panther; Painter; Puma; Cougar; Cran. Skel. American or California Lion. 178. 631.

179,

828, 954.

Skel. Felis onça, Linn. Jaguar; Mexican Tiger. Cran.

Family Canidæ: Dogs, etc. Sub-Family Caninæ: Wolves.

Cran. 184, 185, 713, 714, 1417, 1418.	Skel. 712.	Canis lupus occidentalis, Cs. and Yar. American Wolf; Timber or Buffalo Wolf; Lobo of the Mexicans.
Cran. 186, 710, 711, 715.	907, 1084.	Canis latrans, Say. Coyote; Prairie Wolf. Sub-Family Vulpina: Foxes.
Cran. 189, 190, 191, 192.	Skel. 99.	Vulpes vulgaris pennsylvanicus, Cs. Red Fox.
Cran. 1161.	Skel. 1196.	Vulpes macrourus, Baird. Prairie Fox.
Cran. 955.	Skel. 1314.	Vulpes velox, And. and Bach. Kit Fox; Swift Fox.
Cran. 1546.	Skel.	Vulpes littoralis, Baird. Island Fox.
Cran. 193, 194, 195, 196.	Skel.	Urocyon cinereo-argentatus (Schreber), Cs. Gray Fox. Family Mustelinæ: Weasels, etc. Sub-Family Mustelinæ: Martins.
Cran. 198.	Skel.	Mustela pennanti, Erxl. Fisher; Black Cat.
Cran. 197, 957.	Skel.	Mustela americana, Turton. Pine Martin; American Sable.
Cran.	Skel. 852, 1424.	Putorius longicauda, Rich. Long-tailed Ermine.
Cran. 1058.	Skel. 722, 1075.	Putorius erminea, (Linn.), Cuv. While Weasel; Ermine.

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Skel. Putorius vison, Rich. Brown Mink.
 199,
 595,
1315.
1316.
Cran.
       Skel. Gulo luscus, Sabine. Wolverine.
 200.
                     Sub-Family Melinæ: Badgers.
Cran.
       Skel.
               Taxidea americana (Bodd), Baird. Missouri Badger.
203,
         795.
612,
834.
950,
1419.
                    Sub-Family Mephitinæ: Skunks.
Cran.
       Skel.
               Mephitis mephitica (Shaw), Baird. American Shunk.
 825,
         161.
 202,
 704,
 956,
1193.
                     Sub-Family Lutring: Otters.
       Skel. Lutra canadensis (Turton), Cuv. American Otter.
Cran.
 201.
 951.
                        Family URSIDE: Bears.
               Ursus arctos horribilis (Ord.), Cs. and Yar. Grizzly Bear.
Cran.
        Skel.
 205,
        1042.
 672,
1006,
1043.
        Skel. Ursus americanus, Pallas. Black Bear.
Cran.
 206,
        1210.
 207,
 208,
 209.
 210.
       Skel. Thalarctos maritimus (Linn.), Gray. White or Polar
Cran.
 211.
                   Bear.
                   Family PROCYONIDÆ: Raccoons, etc.
               Sub-Family Procyoninæ: Typical Raccoons.
       Skel. Procyon lotor (Linn.), Starr. Common Raccoon.
Cran.
 204,
        134.
 613,
1060.
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SUB-ORDER PINNIPEDIA.

Family OTARIIDÆ: Eared Seals.

Cran. Skel. Callirhinus ursinus (Schreber), Gray. Fur Seal.

1057.

Cran. Skel. Eumetopias stelleri (Fischer), Gray. Sea Lion.

1048.

Cran. Skel. Zalophus gilliespii (MacBain), Gill. Sea Dog.

261.

Family Phocidæ: Hair Seals.

Sub-Family Phocince.

Cran. Skel. Phoca vitulina, Linn. Common Seal; Harbor Seal.

259.

Cran. Skel. Erignathus barbatus (O. Fabr.), Gill. Square-Flipper Seal.

258.

Sub-Family Cystophorinæ: Crested Seals.

Cran. Skel. Cystophora cristata (Erxl.), Nilsson. Hooded Seal.

266.

Family Rosmaridæ: Walruses.

Cran. Skel. Rosmarus obesus (Illiger), Gill. Atlantic Walrus.

888. 1053.

ORDER Ungulata.

SUB-ORDER ARTIODACTYLI.

Family Bovide: Bovines.

Sub-Family Bovinæ: Typical Bovines.

Cran. Skel. Bos americanus (Gmelin), American Buffalo.

832, 686.

959.

Sub-Family Ovince: Sheep.

Cran. Skel. Ovis montana, Cuvier. Rocky Mountain Sheep; Bighorn.

671. 1051.

1049.

1422.

Family Antilocaprida: American Antelopes.

Cran. Skel. Antilocapra americana (Ord.). Antelope; Prong-horn

252, Antelope; Cabree.

253,

632,

633,

Family CERVIDE: Deer.

Sub-Family Cervinæ: Typical Deer.

		Typical Deci.
Cran. 247, 1022, 1077, 1525, 1537.	Skel. 1069.	Cervus canadensis, Erxl. American Elk; Wapiti.
Cran. 248, 1394.	Skel. 1545.	Cariacus macrotis (Say), Gray. Mule, or Black tailed Deer.
Cran. 249, 250, 251, 622, 635.	Skel. 634.	Cariacus virginianus (Bodd), Gray. Virginia Deer; Red Deer.
Cran. 833, 1395.	Skel. 1544.	Cariacus virginanus macrourus (Raf.), Cs. White-tailed Deer.
		Family DYCOTYLIDÆ: Peccaries.
Cran. 244.	Skel. 829.	Dicotyles torquatus, Cuvier. Peccary.

ORDER Cete.

SUB-ORDER DENTICETE.

Family Delphininæ: Dolphins, etc.
Sub-Family Delphininæ: Typpical Dolphin.

Cran. Skel. Delphinus delphis, Linn. 262. 1308.

SUPER-ORDER INEDUCABILIA.

ORDER Chiroptera.

SUB-ORDER ANIMALIVORA.

Family Noctilionidæ: Free-tailed Bats.

Cran. Skel. Nyctinomus nasutus (Spix.), Tomes. Snouty Bat. 601.

Family VESPERTILIONIDE: Ordinary Bats.

Cran. Skel. Corynorhinus macrotis (Le Conte), Allen. Big-eared Bat. 986.

Cran. Skel. Antrozous pallidus (Le Conte), Allen. Pale Bat.

981. 848.

Cran. Skel. Atalapha (Nycticejus.) crepuscularis (Le Conte), Cs. 1192 1009. Twilight Bat.

Cran. 1353.	Skel. 1198.	Atalapha (Lasiurus) noveboracensis (Erxl.), Cs. Red Bat; New York Bat.
Cran. 992, 996, 997, 1208.	Skel.	Vespertilio subulatus, Say. Little Brown Bat.
Cran. 1008.	Skel. 174, 854.	Vespertilio (Vesperus) fuscus, Beauv. Carolina Brown Bat.
Cran. 1134.	Skel. 849.	Vespertilio (Vesperugo) georgianus, F. Cuv. Georgia Bat.
		Order Insectivora.
		SUB-ORDER INSECTIVORA VERA.
		Family TALPIDÆ: Moles.
		Sub-Family Talpina: Typical Moles.
Cran.	Skel. 112.	Scalops aquaticus (Linn.), Cuvier. Common Mole.
Cran.	Skel. 1106.	Condylura cristata (Linn.), Illiger. Star-nosed Mole.
		Family Soricidæ: Shrews.
Cran. 232.	Skel.	Sorex personatus, Geoff. Masked Shrew.
		Order Glires.
		SUB-ORDER SIMPLICIDENTATA.
		Family Zapodidæ: Jumping Mice.
Cran. 1326.	Skel.	Zapus hudsonius (Zimm.), Cs. Jumping Mouse.
		Family Muridæ: Mice.
		Sub-Family Murinæ: Typical Mice.
Cran.	Skel.	Mus decumanus, Pallas. Common Rat.
130,	19.	
222,		
223,		
552. Cran.	Skel.	Mus tectorum, Savi. White bellied Rat.
984,	DACI.	7. a.o. 600001 alaiy 5. a.o. 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
985.		
Cran.	Skel.	Mus musculus, Linn. Common House Mouse.
225,	69.	
226, 227.		
Cran.	Skel.	Neotoma floridana (Say), Ord. Wood Rat.
224,	10,1201.	
983.		

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Neotoma cinerea (Ord.), Baird. Rocky Mountain Rat.
Cran.
       Skel.
        1356.
                Sigmodon hispidus (Say), Ord. Cotton Rat.
Cran.
        Skel.
967,
 968,
 969,
 970.
Cran.
        Skel.
                Hesperomys (Vesperimus) leucopus (Raf.). White-footed
 597,
        1406.
                  Mouse.
1328.
                  Sub-Family Arvicolinæ: Field Mice.
Cran.
        Skel.
                Arvicola (Myonomes) riparius, Ord. Field Mouse.
 608.
1040,
1404.
Cran.
        Skel. Fiber zibethicus (Linn.), Cuvier. Musk Rat.
 228,
 229,
 230,
1194.
                   Family SACCOMYIDÆ: Pouched Mice.
                       Sub-Family Dipodomyinæ
Cran.
        Skel.
                Dipodomys phillipsi ordi (Woodh.), Cs. Kangaroo Rat.
         681.
        1137.
        Skel. Cricetodipus flavus, Baird. Western Mouse.
Cran.
 990.
                      Family GEOMYIDE: Gophers.
                Geomys bursarius, Shaw. Pouched Gopher.
Cran.
        Skel.
 719,
 827.
                Thomomys talpoides (Rich.), Baird. Fort Union Gopher.
Cran.
        Skel.
        1310.
Cran.
        Skel.
                Thomomys talpoides umbrinus (Rich.), Cs. Black-faced
1001.
                  Gopher.
1002.
                      Family Castorida: Beavers.
                Castor canadensis, Kuhl. American Beaver.
Cran.
        Skel.
220,
        1081,
        1082.
221.
794,
822.
                    Family Sciurida: Squirrels, etc.
                Sub-Family Sciurinæ: Typical Squirrels.
                Sciurus aberti, Woodh. Tuft-eared Squirrel.
Cran.
       Skel.
       1357.
975.
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Cran. 216.	Skel. 1355.	Sciurus hudsonius, Pallas. Red Squirrel.
Cran. 623, 624.	Skel.	Sciurus vulpinus, Gmelin. Southern Fox Squirrel.
Cran. 214, 215.	Skel.	Sciurus cinereus, Linn. Fox or Cat Squirrel of Middle States.
Cran.	Skel.	Sciurus carolinensis, Gmelin. Gray Squirrel.
Cran.	Skel. 175.	Pteromys volucella, Cuv. Flying Squirrel.
Cran. 896.	Skel.	Pteromys volucella oregonensis (Bach). Oregon Flying Squirrel.
Cran. 596.	Skel. 561.	Tamias striatus (Linn.). Chipmunk.
Cran. 1361.	Skel. 1362.	Tamias quadrivittatus (Say), Rich. Four-striped Squirrel.
Cran.	Skel. 1363.	Tamias lateralis (Say), Allen. Rocky Mountain Chipmunk.
Cran. 974,	Skel.	Spermophilus grammurus (Say), Bach. Line-tail Squirrel.
1398. Cran.	Skel.	Spermophilus tridecem-lineatus (Mitch.), Aud. and Bach.
1312, 1313.	1311.	Striped Prairie Squirrel.
Cran. 1433.	Skel.	Spermophilus richardsoni (Sabine), Bd. Richardson's Gopher.
Cran. 217,	Skel. 905,	Cynomys ludovicianus (Ord.), Bd. Prairie Dog.
218,	1409,	
835, 903,	1410.	
904.		
Cran.	Skel. 1352.	Cynomys columbianus (Ord.), Allen. Short-tailed Prairie Dog.
		Sub-Family Arctomyina: Woodchucks.
Cran. 219.	Skel. 1205.	Arctomys monax, Linn. Woodchuck.
Cran. 1358.	Skel.	Arctomys flaviventer, Aud. and Bach. Yellow-bellied Mar- mot.
		Family Hystricide: Porcupines.
Cran.	Skel.	Erethizon dorsatus, Cuvier. Porcupine.

Cran. Skel. Erethizon epixanthus, Brandt. Yellow-haired Porcupine. 231.

SUB-ORDER DUPLICIDENTATA.

Family LEPORIDE: Hares.

Cran. Skel. Lepus americanus, Erxl. Great Northern Hare.

239.

Cran. Skel. Lepus callotis, Wagler. Jackass Rabbit.

237,

797,

1238,

1360.

Cran. Skel. Lepus sylvaticus, Bach. Eastern Gray Rabbit.

240, 164.

241,

242,

243.

Cran. Skel. Lepus sylvaticus nuttali (Bach), Allen. Sage Rabbit.

972,

987,

988.

989.

Cran. Skel. Lepus palustris, Bach. Marsh Rabbit.

238.

Sub-Class Didelphia.

ORDER Marsupialia.

SUB-ORDER DIDELPHIMORPHIA.

Family DIDELPHIDA: Opossums.

Cran. Skel. Didelphys virginianus, Shaw. Common Opossum.

212, 1,

213, 162, 787, 163.

LIST OF CRANIA AND SKELETONS OF FOREIGN AND DOMESTIC MAMMALS.

CLASS MAMMALIA.

Sub-Class Placentalia.

SUPER-ORDER EDUCABILIA.

ORDER Primates.

SUB-ORDER ANTHROPOIDEA.

Family SIMIIDÆ.

Sub-Family Simiinæ.

Cran. Skel. Simia satyrus, Linn. Orang Outang.

1407.

Family Cynopithecidæ.

Sub-Family Cynopithicinæ.

Cran. Skel. Cercopithecus fuliginosus, Cuvier. Moor Ape Monkey.

1066. Skel.

Cercopithecus pygerythus, Cuvier. Vervet.

1299.

Cran. Skel. Macacus senicus (Desm.), Gray. Capped Macaque.

1300.

Cran. Skel. Macacus cynomolgus, Desm. The Kra.

1382.

Cran.

Cran. Skel. Cynocephalus porcarius, Desm. Chacma.

1297.

Family CEBIDÆ.

Sub-Family Mycetinæ.

Cran. Skel. Mycetes seniculus, Kuhl. Golden Howler.

1298.

Sub-Family Cebince.

Cran. Skel. Ateles paniscus, Geoff. Spider Monkey.

1296.

Family MIDIDÆ.

Cran. Skel. Edipus titi, Lesson. Pinche.

1302.

SUB-ORDER PROSIMIÆ.

Family TARSHDÆ.

Cran. Skel. Tarsius spectrum, Geoff. Tarsius.

ORDER Feræ.

SUB-ORDER FISSIPEDIA.

Family Felidæ: Cats, etc.

Sub-Family Felince: Typical Cats.

Skel. Felis domesticus, Linn. Common Cat. Cran. 95. 20, 181. 683. 182, 580. 183.

Felis tigris, Cuv. Bengal Tiger. Cran. Skel.

> Family CANIDÆ: Dogs, Wolves, etc. Sub-Family Canina: Typical Dogs.

Skel. Canis familiaris, Linn. Common Dog. Cran.

29, 35, 76.

187,

188,

739.

Family Mustelidæ: Martins, Weasels, etc. Sub-Family Mustelina; Typical Weasles.

Cran. Skel. Mustela martes, Brisson. Forest Mink. 723.

Putorius fœtidus, Linn. European Iltis. Cran. Skel.

724.

Putorius vulgaris (Briss.). Field Weasel. Cran. Skel. 730.

Cran. 732.

Skel.

Putorius erminea (Linn.). Great Weasel.

Sub-Family Melinæ: Badgers.

Meles taxus, Schreber. European Badger. Cran. Skel. 736.

Sub-Family Lutrinae: Otters.

Lutra vulgaris, Linn. European Otter. Skel. Cran. 740.

ORDER Ungulata.

SUB-ORDER ARTIODACTYLI.

Family Bovides: Bovines.

Sub-Family Bovinæ: Typical Bovines.

Bos taurus (Linn.), Cuvier. Cow. Skel. Cran. 50. 802.

Sub-Family Antilopinæ: European Antelope; Chamois, etc.

Rupicapra tragus, Linn. Chamois. Skel. Cran.

738. 871.

		Sub-Family Caprina: Goats, etc.
Cran.		Capra hircus. Common Goat.
254,	106.	
255,		
256.		Sub-Family Ovinæ: Sheep.
Cran.	Skel.	Ovis aries, Linn. Common Sheep.
257,		
619,		
620.		Family Phacocheride.
Cran.	Skel.	
1309.	Dhu.	I have the witness, Greek // art 11/9.
		Family Suidæ: Swine.
Cran.	Skel.	Sus scrofa, Linn. Common Hog.
47,	123,	
52,	853,	
245,	856.	
246.		
		SUB-ORDER PERISSODACTYLI.
		Family Equidæ: Horses, etc.
34.	Skel. 801.	Equus caballus, Linn. Horse.
Cran. 1408.	Skel.	Equus asinus caballus, Linn. Mule.
		SUPER-ORDER INEDUCABILIA.
		Order Chiroptera.
		SUB-ORDER ANIMALIVORA.
		Family Vespertitionidæ.
		Sub-Family Vespertilioninæ.
C	C111	• •
731.	Skel.	Vesperugo noctula, Blas. Shining Bat.
728.	Skel.	Vesperugo pipistrellus, Blas. Common European Bat.
Cran. 729.	Skel.	Vesperugo discolor, Blas. Parti-colored Bat.
Cran. 727.	Skel.	Plecotus auritus (Linn.), Geoff. Long-eared Bat.
		Order Insectivora.
		SUB-ORDER INSECTIVORA VERA.
		Family TALPIDÆ: Moles.
		Sub-Family Talpina: Typical Moles.
Cran.	Skel.	Talpa europæa, Linn. Black Mole.
734,	Jan Ca.	The state of the s

Family Soricidæ: Shrews.

Cran. Skel. Crocidura araneus (Schreber.). Common Shrew.

Family Erinaceidæ: Hedgehogs.

Sub-Family Erinaceinæ: Typical Hedgehogs.

Cran. Skel. Erinaceus europæus, Linn. Hedgehog. 725.

ORDER Glires.

SUB-ORDER SIMPLICIDENTATI.

Family MURIDÆ: Rats, Mice, etc.

Sub-Family Murinæ: Typical Mice.

Cran. Skel. Arvicola amphibius, Linn. Water-Rat. 726.

Family CAVIIDE: Cavies, etc.

Cran. Skel. Cavia cabaya, Linn. Guinea Pig.

869, 872.

870,

908, 909.

SUB-ORDER DUPLICIDENTATI.

Family LEPORIDE: Rabbits, Hares, etc.

Cran. Skel. Lepus timidus, Linn. European Hare. 737.

Cran. Skel. Lepus cuniculus, Linn. English Rabbit.

234, 48.

235,

236,

1023.

Cran. Skel. Lepus madagascarensis, Linn. Lop-eared Rabbit. 818.

ORDER Bruta.

SUB-ORDER TARDIGRADA.

Family BRADYPODID.E.

Sub-Family Cholopodina.

Cran. Skel. Cholœpus hoffmanii, Gray. Two-toed Sloth. 1303.

SUB-CLASS Didelphia.

ORDER Marsupialia.

SUB-ORDER SYNDACTYLI.

Family PHALANGISTIDÆ.

Sub-Family Phalangistinæ.

Cran. Skel. Phalangista vulpina, Desm. Australian Opossum. 1306.

SUB-CLASS Ornithodelphia.

ORDER Monotremata.

SUB-ORDER TACHYGLOSSA.

Family TACHYGLOSSIDÆ.

Cran. Skel. Echidna aculeata, Gray. Porcupine Ant-eater.

SUB-ORDER PLATYPODA.

Family Ornithorhynchidæ.

Cran. Skel. Ornithorhynchus anatinus, Shaw. Duck-bill Platypus.

LIST OF CRANIA, SKELETONS, AND STERNA OF BIRDS.

Note.—The Classification adopted is that of Dr. Elliot Coues, U. S. A., in his Key to North American Birds, 1872, and the nomenclature corresponds with his Check List of North American Birds, 1873.

CLASS AVES.

ORDER Passeres: Perchers.

SUB-ORDER OSCINES: Singing Birds.

Family Turdidæ: Thrushes.

Sub-Family Turding: Typical Thrushes.

Cran. Skel. Turdus migratorius (L.). Robin.

33, 56, 46.

294,

295.

Cran. Skel. Turdus mustelinus, Gm. Wood Thrush.

296,

297,

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Skel.
Cran.
                Turdus pallasi, Cab., var. Nanus (Aud.), Cs. Dwarf
                   Thrush.
                Turdus Swainsoni, Cab. Olive-backed Thrush.
Cran.
        Skel.
 304.
Cran.
                Turdus fuscescens, Steph. Wilson's Thrush; Veery.
        Skel.
 299,
 300,
 301,
 302.
                Sub-Family Miminæ: Mocking Thrushes.
Cran.
        Skel.
                Mimus polyglottus (L.), Boie. Mockingbird.
 340,
         883.
 341.
Cran.
                Mimus carolinensis (L.), Gr. Catbird.
        Skel.
 342,
 343,
 344,
 345.
                Harporhynchus rufus (L.), Cab. Brown Thrush; Thrusher.
Cran.
        Skel.
 346,
         45.
 347.
Cran.
        Stern. Harporhynchus curvirostris (Sw.), Cab., var. palmeri, Ridg.
         1478.
                   Curve-billed Thrush.
        Stern. Harporhynchus crissalis, Henry. Red-vented Thrush.
Cran.
         1465.
                    Family Saxicolidæ: Stone Chats.
                Sialia sialis (L.), Haldeman. Eastern Bluebird.
Cran.
        Skel.
 305,
        1109.
 306,
                 Sub-Family Polioptilinæ: Gnatcatchers.
Cran.
        Skel.
                Polioptila cærulea, Scl. Blue-Gray Gnatcatcher.
                        Family PARIDE: Titmice.
Cran.
        Skel.
                Lophophanes bi-color (L.), Bp. Tufted Titmouse.
         354.
        Stern. Lophophanes inornatus (Gamb.), Cass. Plain Titmouse.
Cran.
1495.
        1496.
        Stern. Lophophanes wollweberi, Bp. Bridled Titmouse.
Cran.
         1476.
Cran.
        Skel. Parus atricapillus, L. Black-capped Chickadee.
357,
 358.
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Parus atricapillus, L., var. carolinensis (Aud.), Cs. Caro-
        Skel.
Cran.
                  lina Chickadee.
1371,
1372,
1373,
1374.
                      Family SITTIDE: Nuthatches.
                                        White-bellied Nuthatch.
                Sitta carolinensis, Gm.
        Skel.
Cran.
 350,
                Sitta canadensis, L. Red-bellied Nuthatch.
        Skel.
Cran.
 352,
                      Family CERTHIIDÆ: Creepers.
         Stern. Certhia familiaris, L. Brown Creeper.
 Cran.
          1507.
                          Campylorhynchus brunneicapillus (Lafr.), Gr.
                 Stern.
         Skel.
 Cran.
                             Brown-headed Creeper- Wren.
                  1517.
         1402.
 1516.
                      Family TROGLODYTIDE: Wrens.
                 Troglodytes ædon, V. House Wren.
         Skel.
 Cran.
  349.
                 Troglodytes ædon, V., var. parkmanni (Aud.), Cs. Western
         Skel.
 Cran.
                    House Wren.
  1513.
                                                        Long-billed Marsh
                 Telmatodytes palustris (Nils.), Cab.
         Skel.
 Cran.
  348.
                  Cistothorus stellaris (Licht.), Cab. Short-billed Marsh
         Skel.
  Cran.
                     Wren.
  1348.
                         Family ALAUDIDÆ: Larks.
                           Eremophila alpestris (Forst.), Boie.
                                                                   Horned
                  Stern.
  Cran.
          Skel.
                             Lark; Shore Lark.
                   1430.
          1434.
   359.
   913,
   914.
                  Family Sylvicolidæ: American Warblers.
                 Parula americana (L.), Bp. Blue Yellow-backed Warbler.
          Skel.
  Cran.
   310.
           Stern. Helminthophaga peregrina (Wils.), Cal. Tennessee Warbler.
   Cran.
            1350.
   1349.
           Stern. Dendræca æstiva (Gm.), Bd. Summer Warbler.
   Cran.
            1331.
    321,
    322,
   1330,
                   Dendræca virens (Gm.), Bd. Black-throated Green Warbler.
    1332.
           Skel.
   Cran.
                   Dendrœca cærulescens (L.), Bd. Black-throated Blue War-
    316.
           Skel.
   Cran.
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Cran.

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Dendræca coronata (L.), Gr. Yellow-rumped Warbler;
         Skel.
                   Myrtle Bird.
                Dendræca blackburniæ (Gm.), Bd. Blackburnian Warbler.
 Cran.
         Skel.
  327.
 Cran.
         Skel. Dendræca striata (Forst.), Bd. Black-poll Warbler.
  324.
         Skel. Dendræca castanea (Wils.), Bd. Bay-breasted Warbler.
 Cran.
  317,
  318.
 Cran.
                         Dendræca pennsylvanica (L.), Bd. Chestnut-sided
         Skel.
                 Stern.
  319,
         1347.
                 1347.
                            Warbler.
  320.
 Cran.
         Skel.
                Dendræca discolor (V.), Bd. Prairie Warbler.
 328.
        Skel. Geothlypis trichas (L.), Cab. Maryland Yellow-throat.
 Cran.
 312,
 313,
 314.
        Stern. Geothlypis macgillvrayi (Aud.), Bd. Macgillivray's Warbler.
Cran.
 1431.
         1432.
Cran.
        Skel. Icteria virens (L.), Bd. Yellow-breasted Chat.
 393.
Cran.
        Skel. Setophaga ruticilla (L.), Sw. Redstart.
 329.
 330,
 331,
 332.
                     Family TANAGRIDE: Tanagers.
Cran.
        Skel. Pyranga rubra (L.), V. Scarlet Tanager.
 308.
Cran.
        Skel.
                Pyranga æstiva (L.), V., var. cooperi (Ridg.), Cs. Cooper's
1510.
                  Tanager.
               Pyranga hepatica, Sw. Hepatic Tanager.
Cran.
        Skel.
1497.
                    Family HIRUNDINIDE: Swallows.
                Stern. Hirundo horreorum, Barton. Barn Swallow.
Cran.
        Skel.
1449.
        187.
                Tachycineta bicolor (V.), Cs. White-bellied Swallow.
Cran.
       Skel.
       101.
 551,
1013.
1014.
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Cran. Skel. Petrochelidon lunifrons (Say), Cab. Cliff Swallow: Eave
333.
                 Swallow.
334.
       Stern. Stelgidopteryx serripennis (Aud.), Bd.
                                                         Rough-winged
Cran.
1514.
        1513.
                  Swallow.
       Skel. Progne purpurea (L.), Boie. Purple Martin.
Cran.
        1506.
                    Family AMPELIDE: Waxwings.
               Ampelis cedrorum (V.), Bd. Cedar Bird; Cherry Bird.
Cran.
       Skel.
32, 624.
65, 336.
                     Family VIREONIDA: Greenlets.
        Skel. Vireo olivaceus (L.), V. Red-eyed Vireo.
Cran.
 337.
 338,
        Stern. Vireo vicinior, Coues. Gray Vireo.
Cran.
1460.
        1461.
                       Family LANIIDÆ: Shrikes.
        Stern. Collurio borealis (V.), Bd. Great Northern Shrike; Butcher-
Cran.
         1474.
                  bird.
                     Family FRINGILLIDÆ: Finches.
        Skel. Carpodacus purpureus (Gm.), Gr. Purple Finch.
Cran.
  382,
 1372.
                Stern. Carpodacus frontalis (Say), Gr. Crimson-fronted
Cran.
        Skel.
                           Finch; House Finch.
 1501.
        1519.
                1502.
                Loxia curvirostra, L., var. americana (Wils.), Cs. Com-
        Skel.
Cran.
 374.
                  mon Crossbill.
                Chrysomitris tristis (L.), Bp. American Goldfinch; Yellow-
Cran. Skel.
                  bird.
        1207.
  375,
  376,
 1376.
        Stern. Chrysomitris psaltria (Say), Bp. Arkansas Goldfinch.
Cran.
 1493.
         1494.
        Stern. Passerculus savanna (Wils.), Bp. Savannah Sparrow.
Cran.
         1335.
 384,
 385.
        Skel. Melospiza palustris (Wils.), Bd. Swamp Sparrow.
Cran.
 369.
 370.
        Skel. Melospiza melodia (Wils.), Bd. Song Sparrow.
Cran.
  392,
 1379.
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Cran.
        Skel. Melospiza melodia (Wils.), Bd. var. fallax (Bd.), Ridg.
 976.
                   Gray Song-Sparrow.
                Junco hyemalis (L.), Scl. Snowbird.
Cran.
        Skel.
 386.
          4.
 387,
 388,
 389.
Cran.
                Junco cinereus (Sw.), Cab., var. caniceps (Woodh.), Cs.
        Skel.
 1518.
                   Cinereous Snow Bird.
Cran.
        Skel.
                Spizella monticola (Gm.), Bd. Tree Sparrow.
  390,
 1378.
                Spizella socialis (Wils.), Bp. Chipping Sparrow.
Cran.
        Skel.
 381.
Cran.
                Spizella socialis (Wils.), Bp., var. arizonæ, Cs. Arizona
        Skel.
 1488.
                    Chipping Sparrow.
        Stern. Spizella pusilla (Wils.), Bp. Field Sparrow.
Cran.
  380.
        1448.
 1447.
Cran.
        Stern. Spizella pallida (Sw.), Bp. var. breweri (Cass.), Cs.
1503.
                  Brewer's Sparrow.
 1504.
Cran.
        Skel. Zonotrichia albicollis (Gm.), Bp. While-throated Sparrow.
  371,
  372,
  373,
 1377.
Cran.
                Passerella iliaca (Merrem.), Sw. Fox Sparrow.
 368.
        Stern. Calamospiza bicolor (Towns.), Bp. Lark Bunting: White-
Cran.
1486.
        1487.
                   winged Blackbird.
                Euspiza americana (Gm.), Bp. Black-throated Bunting.
Cran.
        Skel.
 367.
                         Goniaphea ludoviciana (L.), Bowdich.
Cran.
        Skel.
                Stern.
1345.
                1346.
                           breasted Grosbeak.
        Stern. Goniaphea melanocephala (Sw.), -----. Black-headed
Cran.
                  Grosbeak.
1511.
        1512.
                Cyanospiza cyanea (L.), Bd. Indigo Bird.
        Skel.
Cran.
Cran.
        Stern. Cardinalis virginianus (Brisson), Bp. Cardinal Redbird.
 40,
        1278.
362.
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Pipilo erythrophthalmus (L.), V. Towhee Bunting; Che-
Cran.
       Skel.
                 wink.
364,
366.
       Skel. Pipilo fuscus, Sw. Brown Towhee; Canon Finch.
Cran.
1489.
                 Family ICTERIDÆ: American Starlings.
                Stern. Dolichonyx oryzivorus (L.), Sw. Bobolink; Reed-
Cran.
        Skel.
                 1344.
                           bird; Ricebird.
37, 79,
        584.
394,
               Molothrus ater (Gm.), Sw. Cowbird.
Cran.
        Skel.
 396.
        1325.
               Agelæus phœniceus (L.), V. Red-winged Blackbird.
Cran.
       Skel.
         117.
  70.
 397,
 398,
 399.
        Stern. Xanthocephalus icterocephalus (Br.), Bd. Yellow-headed
Skel.
1492.
        1479.
                   Blackbird.
                Sturnella magna (L.), Sw. Field-Lark; Meadow-Lark.
Cran.
        Skel.
         14.
 400,
 401,
 402.
        Stern. Sturnella magna (L.), Sw. var. neglecta (Aud.), All. West-
Cran
        1471.
                  ern Field-Lark.
        Skel.
                Icterus baltimore (L.), Daudin. Baltimore Oriole.
Cran.
 403.
                Icterus bullockii (Sw.), Bp. Bullock's Oriole.
Cran.
        Skel.
 1472,
 1525.
Cran.
        Skel.
                Scolecophagus ferrugineus (Gm.), Sw. Rusty Grackle.
 404,
         809.
 405.
 406.
        Stern. Scolecophagus cyanocephalus (Magl.), Cab. Blue-headed
Cran.
 939.
        1473.
                  Grackle.
Cran.
        Skel.
                Stern. Quiscalus purpureus (Bartr.), Licht.
                                                                Purple
  39,
         824.
                             Grackle; Crow Blackbird.
                 1279.
 407,
 408.
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Family Corvidæ: Crows.
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Sub-Family Corvinæ: Ravens and Crows.

Cran. Skel. Corvus corax, Linn. Raven.

410,

707,

927,

1467.

Cran. Skel. Corvus cryptoleucus, Couch. White-necked Raven.

411.

Cran. Skel. Corvus americanus, Aud. Common Crow.

412, 133.

413,

838.

Cran. Skel. Corvus ossifragus, Wils. Fish Crow.

414.

Cran. Skel. Picicorvus columbianus (Wils.), Bp. Clarke's Crow.

926,

979, 1391.

Cran. Skel. Gymnokitta cyanocephala, Maxim. Blue Crow.

971.

Sub-Family Garruline: Jays.

Cran. Skel. Pica melanoleuca, V., var. nuttalli (Aud.), Cs. Yellow-

1400. billed Magpie.

Cran. Skel. Cyanurus cristatus (L.), Sw. Blue Jay.

415, 115.

416,

417,

418.

Cran. Stern. Aphelocoma floridana (Bartr.), Cab., var. Woodhousei 1469. (Bd.), All. Woodhouse's Jay.

Cran. Skel. Perisoreus canadensis (L.), Bp. Canada Jay.

419.

SUB-ORDER Clamatores.

Family TYRANNIDE: American Flycatchers.

Cran. Skel. Stern. Tyrannus carolineusis (L.), Bd. Kingbird; Bee-

291, 1339. 1342. Martin.

292,

1340,

1341.

Cran. Skel. Contopus virens (L.), Cab. Wood Pewee.

293.

Cran. Skel. Stern. Contopus virens (L.), Cab., var. richardsonii

1508. 1498. 1509. (Sw.), Cs. Western Wood Pewee.

ORDER Picariae: Picarian Birds.

SUB-ORDER CYPSELI: Cypseliform Birds.

Family CAPRIMULGIDÆ: Goatsuckers.

Cran. Skel. Antrostomus vociferus (Wils.), Bp. Whippoorwill; Night-861. Jar.

Family CYPSELIDÆ: Swifts.

Cran. Skel. Panyptila saxatilis (Woodh.), Cs. White-throated Swift. 1500.

Cran. Skel. Chætura pelasgia (L.), Steph. Chimney Swift.

Family TROCHILIDÆ: Humming-Birds.

Cran. Skel. Trochilus colubris, L. Ruby-throated Humming-Bird. 290.

Cran. Stern. Trochilus alexandri, Bourc. Black-chinned Humming-Bird. 1456, 1459.

1457,

1458.

Cran. Stern. Selasphorus rufus (Gm.), Sw. Rufous-backed Humming-

1453, 1455. Bird.

1454.

Cran. Stern. Selasphorus platycercus (Sw.), Gld. Broad-tailed Hum-

1449, 1452. ming-Bird.

1450,

1451.

Cran. Stern. Stellula calliope (——), Gld. Calliope Humming-Bird. 1522.

Family Alcidinida: Kingfishers.

Cran. Skel. Ceryle alcyon (L.), Boie. Belted Kingfisher. 155.

Family Cuculidæ: Cuckoos.

Cran. Stern. Geococcyx californianus (Less.), Bd. Ground Cuckoo;

1466. 1404. Chaparral Cock.

Cran. Skel. Coccysus erythrophthalmus (Wils.), Bd. Black-billed 281.

Cran. Skel. Coccyzus americanus (L.), Bp. Yellow-billed Cuckoo.

278,

279,

280.

Family PICIDÆ: Woodpeckers.

Cran. Skel. Hylotomus pileatus (L.), Bd. Pileated Woodpecker; Log-621, 550. cock.

Skel. Picus scalaris, Wagl. var. nuttalli (Gamb.), Cs. Nuttall's Cran. 1400. Woodpecker.

Cran. Skel. Picus villosus, L. Hairy Woodpecker.

602.

1370.

Stern. Picus villosus, L., var. harrisi (Aud.), All. Harris' Wood-Cran.

1491. 1477. pecker.

Cran. Skel. Picus pubescens, L. Downy Woodpecker.

282,

283.

Stern. Picoides americanus, Brehm., var. dorsalis (Bd.), All. Cran. Striped-backed Woodpecker. 1475.

Cran. Stern. Sphyrapicus varius (L.), Bd. Yellow-bellied Skel. 1336. 811. 1276. Woodpecker.

Stern. Sphyrapicus thyroideus (Cass.), Bd. Brown-headed Wood-Cran. 1397. pecker.

Cran. Centurus uropygialis, Bd. Gila Woodpecker. Skel. 1483.

Cran. Skel. Stern. Melanerpes erythrocephalus (L.), Sw. Red-headed 284. 1106. 1338. Woodpecker,

285,

1337.

Cran. Colaptes auratus (L.), Sw. Golden-winged Wood-Skel. Stern. 286. 118. 1327. pecker; Flicker.

287,

288,

289.

Stern. Colaptes mexicanus, Sw. Red-shafted Woodpecker. Cran. 1470.

ORDER Psittaci: Parrots.

Family ARIDE: Parroquets.

Cran. Skel. Conurus carolinensis (L.), Kuhl. Carolina Parroquet. 277.

ORDER Raptores: Birds of Prey.

Family STRIGIDÆ: Owls.

Strix flammea, L., var. americana (Aud.), Cs. Barn Owl. Cran. Skel. 1351.

Cran. Skel. Bubo virginianus (Gm.), Bp. Great Horned Owl. 860.

270.

837.

Cran. Skel. Scops asio (L.), Bp. Screech Owl; Mottled Owl.

274. 610.

Cran. Skel. Stern. Otus vulgaris (L.), var. wilsonianus (Less.), All. 603. 1241. Long-eared Owl.

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Brachyotus palustris (Bechst), Bp. Short-eared Owl.
Cran.
        Skel.
         591.
 273,
 788.
                Syrnium nebulosum (Forst.), Gr. Barred Owl.
        Skel.
Cran.
 272.
         156.
                Nyctea nivea (Daud.), Gr. Snowy Owl.
        Skel.
Cran.
                Nyctale acadica (Gm.), Bp. Acadian Owl; Saw-whet Owl.
        Skel.
Cran.
 897.
        Stern. Glaucidium passerinum (L.), Bp., var. californicum (Scl.),
Cran.
                   Ridg. Pygmy Owl.
         1403.
               Family FALCONIDE: Diurnal Birds of Prey.
                Circus cyaneus (L.), Lacép., var. hudsonius (L.), Cs.
Cran.
                  Marsh Hawk; Harrier.
 268,
 921.
                         Accipiter fuscus (Gm.), Bp.
                                                          Sharp-shinned
Cran.
        Skel.
                Stern.
                 1295.
                           Hawk; Pigeon Hawk.
         604.
  949,
 1294.
                Accipiter cooperi, Bp. Cooper's Hawk; Chicken Hawk.
        Skel.
Cran.
 266,
         800.
 717.
                Astur atricapillus (Wils.), Bp. Goshawk.
Cran.
        Skel.
 265.
         139.
                Falco (Hiero-falco) gyrfalco (Linn.), var. islandicus Sabine.
Cran.
        Skel.
 922.
        Stern. Falco mexicanus (Licht.), var. polyagrus, Ridg. Lanier
Cran.
         1386.
                   Falcon.
                Falco communis Variorum. Peregrine Falcon; Duck Hawk.
Cran.
        Skel.
 923.
                Falco columbarius, L. Pigeon Hawk.
        Skel.
Cran.
 924,
 269.
                 Buteo borealis (Gm.), V. Red-tailed Buzzard; Hen Hawk.
Cran.
        Skel.
         15.
 263,
 264,
 716.
                 Stern.
                          Buteo borealis (Gm.), V., var. calurus (Cass.),
 Cran.
         Skel.
                 1462.
                           Ridg. Western Red-tailed Buzzard.
         1369.
 1485.
                 Buteo lineatus (Gm.), Jard. Red-shouldered Buzzard.
         Skel.
 Cran.
 267,
 708.
         Stern. Buteo swainsoni, Bp. Swainson's Buzzard.
 Cran.
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Archibuteo lagopus (Brunn.), Gr., var. sancti-johannis
Cran.
        Skel.
 936,
                   (Gm.), Ridg. Rough-legged Buzzard.
 937,
 938.
Cran.
        Stern.
                 Asturina plagiata, Schlegel. Gray Hawk.
         1463.
        Skel.
                Pandion haliaetus (L.), Savigny. Fish Hawk; Osprey.
Cran.
Cran.
        Skel.
                Aquila chrysaetus, (L.). Golden Eagle.
  891,
         796.
 1197.
Cran.
        Skel. Haliaetus leucocephalus (L.), Savigny. White-headed Eagle;
 836.
                  Bald Eagle.
 892,
 893.
                Family Cathartidæ: American Vultures.
Cran.
        Skel.
                Cathartes aura (L.), Illiger. Turkey Buzzard.
 709.
         138.
                   ORDER Columbae: Pigeons, etc.
                      Family Columbide: Pigeons.
Cran.
        Skel.
                Columba fasciata, Say. Band-tailed Pigeon.
 1490.
Cran.
        Skel.
                Ectopistes migratorius (L.), Sw. Wild Pigeon.
 424.
        958.
        Skel.
                Zenædura carolinensis (L.), Bp. Carolina Dove.
Cran.
 425.
         114.
 426,
 427,
 428.
                ORDER Gallinæ: Gallinaceous Birds.
                    Family MELEAGRIDIDE: Turkeys.
                Meleagris gallopavo, L. Turkey.
Cran.
        Skel.
 429.
         141.
 430.
                         Meleagris gallopavo, L., var. americana (Bartr.),
Cran.
        Skel.
                Stern.
                           Cs. Common Wild Turkey.
 965,
        1390.
                 1446.
 966.
        1445,
 1446.
        1446.
                   Family TETRAONIDÆ: Grouse, etc.
                    Sub-Family Tetraoninæ: Grouse.
                Tetrao canadensis, L. Canada Grouse; Spruce Partridge.
Cran.
        Skel.
 435.
        Stern. Centrocercus urophasianus (Bp.), Sw. Sage Cock; Cock-
Cran.
1426.
        1427.
                   of-the-plains.
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Skel. Pediœcetes phasianellus (L.), Ell. Northern Sharp-tailed
 436,
        1428.
                  Grouse.
 1429.
        Skel.
               Cupidonia cupido (L.), Bd. Pinnated Grouse; Prairie Hen.
Cran.
 437,
         140.
 438.
 439.
Cran.
        Skel.
               Bonasa umbellus (L.), Steph. Ruffed Grouse; Partridge;
                  Pheasant.
        Skel. Lagopus albus (Gm.), Aud. Willow Ptarmigan.
Cran.
 940.
            Sub-Family Odontophorinæ: American Partridge.
                Stern. Ortyx virginianus (L.), Bp. Virginia Partridge;
Cran.
        Skel.
                           Quail; Bob-white.
  31.
         125.
                1280.
  77,
 78.
 440.
        Skel. Oreortyx pictus (Dougl.), Bd. Plumed Partridge.
Cran.
 925.
Cran.
        Skel. Lophortyx californicus (Shaw), Bp. California Partridge.
 973.
Cran.
        Skel.
                         Cyrtonyx massena (Less.), Gld. Massena Part-
                Stern.
1392, 1389.
               1393.
                           ridge.
                ORDER Grallatores: Wading Birds.
               SUB-ORDER LIMICOLÆ: Shore Birds.
                     Family CHARADRIIDÆ: Plover.
                Sub-Family Charadriinæ: True Plover.
               Charadrius fulvus, Gm., var. virginicus (Borck.), Cs.
        Skel.
Cran.
 868.
         867.
                  Golden Plover.
920.
               Ægialitis vociferus (L.), Cass. Kildeer Plover.
Cran.
        Skel.
606,
        150.
607,
991.
                  Family RECURVIROSTRIDÆ: Avocets.
Cran.
       Stern. Recurvirostra americana, Gm. Avocet.
        1387.
Cran.
       Skel.
               Himantopus nigricollis, V. Stilt.
        1359.
                 Family PHALAROPODIDE: Phalaropes.
Cran.
       Stern. Steganopus wilsoni (Sab.), Cs. Wilson's Phalarope.
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1435,

1436.

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Family Scolopacidæ: Snipe. etc.
                 Philohela minor (Gm.), Gr. American Woodcock.
Cran.
        Skel.
 449.
         116.
Cran.
        Skel.
                          Gallinago wilsoni (Temm.), Bp. American Snipe;
                 Stern.
 450,
         151.
                  1292.
                          . Wilson's Snipe.
 898.
Cran.
                          Ereunetes pusillus (L.), Cass.
        Skel.
                 Stern.
                                                           Semi-palmated
 1481.
        1480.
                 1482.
                            Sandpiper.
                Tringa maculata V. Pectoral Sandpiper.
Cran.
        Skel.
 1343.
          862.
Cran.
        Skel.
                Tringa alpina, L., var. americana, Cass. American Dunlin.
 451.
                 Limosa fedoa (L.), Ord. Great Marbled Godwit.
Cran.
        Skel.
 456.
Cran.
        Skel.
                Totanus melanoleucus, Gm. Greater Tell-tale.
         1293.
Cran.
        Skel.
                Totanus flavipes, Gm. Yellow-Shanks.
 452.
Cran.
        Skel.
                Totanus solitarius, Wils. Solitary Tattler.
 453.
Cran.
        Skel.
                Tringoides macularius (L.), Gr. Spotted Sandpiper.
 454,
 455.
Cran.
        Skel.
                 Actiturus bartramius (Wils.), Bp. Bartramian Sandpiper;
         1425.
                   Upland Plover.
Cran.
        Skel.
                 Numenius longirostris, Wils. Long-billed Curlew.
  458,
  459,
 1079.
Cran.
        Skel.
                Numenius hudsonicus, Lath. Hudsonian Curlew.
 457.
Cran.
                Numenius borealis (Forst.), Lath. Esquimaux Curlew.
        Skel.
 928,
 929.
        SUB-ORDER HERIODIONES: Herons and their allies.
                     Family TANTALIDE: Ibises, etc.
                   Sub-Family Ibidinæ: True Ibises.
        Skel.
                Ibis falcinellus, Auct., var. ordii (Bp.), All. Glossy Ibis.
Cran.
 448.
                Ibis alba (L.), V.
                                   White Ibis.
Cran.
        Skel.
 447,
1162.
                Platalea ajaja, L. Roseate Spoonbill.
Cran.
        Skel.
1016,
1163.
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Family ARDEIDE: Herons.

Sub-Family Ardeinæ: True Herons.

Cran. Skel. Ardea herodias, L. Great Blue Heron.

1012. 582.

Cran. Skel. Ardea leucogastra, Gm., var. leucoprymna (Licht.), Cs.

442. Louisiana Heron.

Cran. Skel. Stern. Ardea virescens, L. Green Heron.

443, 511. 1281.

444,

445.

Cran. Skel. Nyctiardea grisea (L.), Steph., var. nævia (Bodd.), Allen.

446. Night Heron.

Cran. Skel. Botaurus minor (Gm.). Bittern; Indian Hen.

1289.

SUB-ORDER ALECTORIDES: Cranes, Rails, etc.

Family GRUIDÆ: Cranes.

Cran. Skel. Grus canadensis (L.), Temm. Brown Crane; Sandhill 441.

Family RALLIDÆ: Rails.

Sub-Family Rallinæ: True Rails.

Cran. Skel. Rallus virginianus, L. Virginia Rail.

977.

Cran. Skel. Porzana carolina (L.), V. Carolina Rail; Sora; Ortolan.

461, 466.

Cran. Skel. Fulica americana, Gm. Coot.

462, 124.

463,

464.

ORDER Lamellirostres: Anserine Birds.

Family ANATIDE: Swan, Geese, and Ducks.

Sub-Family Cygninæ: Swans.

Cran. Skel. Cygnus americanus, Sharpless. Whistling Swan.

465, 12.

901,

902.

Sub-Family Anserinæ: Geese.

Cran. Skel. Anser hyperboreus, Pall. Snow Goose.

930.

Cran. Skel. Branta bernicla, L. Brant Goose.

473,

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Cran.
         Skel. Branta berniela, var. nigricans (L.), Cs. Brant Goose.
  941,
  484α.
 Cran.
                 Branta canadensis (L.) Canada Goose; Wild Goose.
         Skel.
   470,
           17.
   471.
   472.
  1127.
 Cran.
                Branta canadensis (L.), var. hutchinsii (Rich.), Cs. Hut-
         Skel.
  931,
                   chins's Goose.
  932,
                   Sub-Family Anatinæ: River Ducks.
 Cran.
         Skel.
                 Anas boschas, L. Mallard.
  477,
         1115.
  478,
  889.
         Skel. Anas obscura, Gm. Dusky Duck.
 Cran.
  479.
        Stern. Dafila acuta (L.), Jenyns. Pintail: Sprigtail.
 Cran.
 480,
         1284.
 481.
                Mareca americana (Gm.), Steph. American Widgeon :
 Cran.
        Skel.
 486,
        1114.
                  Baldpate.
 487,
 488,
 935.
Cran.
                Querquedula carolinensis (Gm.). Green winged Teal.
        Skel.
 482,
        1117.
 483.
                Querquedula discors (L.), Steph. Blue-winged Teal.
Cran.
        Skel.
 934.
       Stern. Querquedula cyanoptera (V.), Cass. Cinnamon Teal.
Cran.
         1388.
Cran.
        Skel. Spatula clypeata (L.), Boie. Shoveller.
 484,
 485,
942,
943.
       Skel. Aix sponsa (L.), Boie. Summer Duck; Wood Duck.
Cran.
489,
490.
491.
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Sub-Family Fuligulinæ: Sea Ducks.

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Fuligula marila (L.), Steph. Greater Blackhead.
Cran.
        Skel.
 492.
                Fuligula affinis, Eyton. Lesser Blackhead.
Cran.
        Skel.
        1124.
 493.
 494,
 495.
        Skel. Fuligula collaris (Donovan), Bp. Ring-necked Duck.
Cran.
 496,
 497,
 498.
        Skel. Fuligula ferina (L.), Sw. var. americana (Eyton), Cs.
Cran.
                  Red-head: Pochard.
 499,
        1123.
 500,
 946,
 947.
                Fuligula vallisneria (Wils.), Steph. Canvas-back.
Cran.
        Skel.
        1125.
 501,
 502,
 503,
 504.
                Stern. Bucephala clangula (L.), Gr. Golden-eyed Duck.
Cran.
        Skel.
 505,
        1128.
                1468.
 506.
 507,
 508.
                Bucephala albeola (L.), Bd. Buffle-headed Duck.
Cran.
        Skel.
         129.
 509,
 510,
 511,
 512.
                Harelda glacialis (L.), Leach. Long-tailed Duck.
Cran.
        Skel.
         1119.
 514,
 515,
 918.
        Skel. Histrionicus torquatus (L.), Bp. Harlequin Duck.
Cran.
 513.
                Somateria spectabilis (L.), Leach. King Eider.
        Skel.
Cran.
 917.
                 Œdemia fusca (L.), Sw. (? var. velvetina, Cass).
 Cran.
         Skel.
         627.
                   Scoter.
  628.
 1132.
         Skel. Œdemia perspicillata (L.), Fleming. Surf Duck.
 Cran.
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Skel. Erismatura rubida (Wils.), Bp. Ruddy Duck. Cran. 516, 1111. 617. Sub-Family Merginæ: Mergansers. Cran. Skel. Stern. Mergus merganser, L. Merganser; Goosander. 614, 8. 1286. 840. Mergus serrator, L. Red-breasted Merganser. Cran. Skel. 1130. Cran. Skel. Mergus cucullatus, L. Hooded Merganser. 518, 1118. 519. ORDER Steganopodes: Totipalmate Birds. Family Pelecanidæ: Pelicans. Skel. Pelecanus trachyrhynchus, Lath. White Pelican. Cran. 1076. Skel. Pelecanus fuscus, L. Brown Pelican. Cran. 895, 1037. Family PHALACROCORACIDÆ: Cormorants. Cran. Skel. Graculus carbo (L.), Gray. Common Cormorant; Shag. 521. Stern. Graculus bicristatus (Pall.), Bd. Red-faced Cormorant. Cran. 1287. Cran. Skel. Plotus anhinga, L. Anhinga; Darter. ORDER Longipennes: Long-winged Swimmers. Family LARIDÆ: Gulls, Terns, etc. Sub-Family Lestridinæ: Jaegers, or Skua Gulls. Skel. Stercorarius parasiticus (Brunn.), Gray. Richardson's Cran. 916. Jaeger. Sub-Family Larinæ: True Gulls. Larus glaucescens, Licht. Glaucous-winged Gull. Skel. 900 1246. Larus argentatus, Brunn. Herring Gull; Common Gull. Cran. Skel. 1055. 826. Cran. Skel. Larus delawarensis, Ord. Ring-billed Gull.

Cran. Skel. Larus philadelphia (Ord.), Cs. Bonaparte's Gull. 525, 899.

Stern. Larus tridactylus, L. Kittewake.

153.

1248.

Cran.

Sub-Family Sterning: Terns.

Cran. Skel. Hydrochelidon fissipes (L.), Gray. Black Tern. 173.

Family PROCELLARIIDE: Petrels.

Sub-Family Diomedeinæ: Albatrosses.

Cran. Skel. Diomedea nigripes, Aud. Black-footed Albatross. 523.

Sub-Family Procellariinæ: True Petrels.

Cran. Skel. Fregetta grallaria (V.), Bp. White-bellied Petrel. 524.

ORDER Pygopodes: Diving Birds.

Family Colymbidæ: Loons.

Cran. Skel. Colymbus torquatus, Brunn. Loon; Great Northern 611.

Cran. Skel. Colymbus arcticus, L. Black-throated Diver.

944.

Cran. Skel. Colymbus arcticus, L., var. pacificus (Lawr.), Cs. 526. Pacific Diver.

Cran. Skel. Colymbus septentrionalis, L. Red-throated Diver. 527.

Family Podicipidæ: Grebes.

Cran. Skel. Podiceps griseigena (Bodd.), Gray, var. holbölli (Reinh.), 919 Cs. Red-necked Grebe.

Cran. Skel. Podiceps cornutus (Gm.), Lath. Horned Grebe.

1121. 1120.

Cran. Skel. Podilymbus podiceps (L.), Lawr. Pied-billed Dabchick. 720.

Family Alcidæ: Auks.

Cran. Stern. Phaleris psittacula (Pall.), Temm. $Paroquet\ Auk.$ 1250.

Cran. Stern. Simorhynchus cristatellus (Pall.), Merrem. Crested Auk. 1251.

Cran. Stern. Simorhynchus camtschaticus (Lepech.), Schl. Whiskered 1249. Auk.

Cran. Skel. Uria, sp. 1247.

LIST OF CRANIA AND SKELETONS OF FOREIGN AND DOMESTIC BIRDS.

Sub-Class Carinatæ: Carinate Birds.

ORDER Passeres: Passerine Birds.

Family FRINGILLIDÆ: Finches, etc.

Cran. Skel. Fringilla canaria, Linn. Canary Bird. 377, 593.

378,

379.

1010.

Cran. Skel. Pyrrhula vulgaris, Cuv. Bulfinch.

1101.

Cran. Skel. Carduelis elegans, Bp. Goldfinch.

ORDER Psittaci: Parrots.

Family PSITTACIDE: Typical Parrots.

Cran. Skel. Psittacus erythacus, Linn. Red-tailed Parrot. 275.

Cran. Skel. Chrysotis ochrocephala (Gm.). Yellow-fronted Parrot. 276.

ORDER Columbæ: Pigeons, etc.

Family Columbidæ: Typical Pigeons.

Cran. Skel. Columba liria (domestica), Linn. Common Pigeon.

420,

421, 422.

423.

ORDER Gallinæ: Gallinaceous Birds.

Family Phasianidæ: Pheasants.

Cran. Skel. Pavo cristatus, Linn. Peacock.

586. 1044.

Cran. Skel. Gallus bankivi (var.), Temm. Domestic Fowl.

88, 41,

431, 1365.

432,

Family Numididæ: Guinea Fowls.

Cran. Skel. Numida meleagris, Linn. Guinea Fowl. 434. 27.

ORDER Lamellirostres: Anserine Birds.

Family Anatidæ: Swans, Geese, etc.

Sub-Family Anserinæ: Geese.

Cran. Skel. Anser ferus (domesticus), Linn. Common Goose.

466,

467,

468,

469.

Cran. Skel. Anser cygnoides, Linn. Swan Goose. 149.

Sub-Family Anatinæ: River Ducks.

Cran. Skel. Anas boschas (domesticus), Linn. Common Duck.

97,

98,

475,

476.

SUB-CLASS Ratitæ: Struthious Birds.

ORDER Struthiones: Struthious Birds.

Family STRUTHIONIDÆ: Ostrich.

Cran. Skel. Struthio camelus, Linn. Ostrich.

1438.

Family CASUARIIDE: Emeus, etc. Sub-Family Dromaine: Emeus.

Cran. Skel. Dromæus novæ-hollandiæ, Lath. Common Emeu. 1439.

LIST OF CRANIA AND SKELETONS OF NORTH AMERICAN BATRACHIA AND REPTILIA.

Note.—The classification and nomenclature adopted are according to Prof. Edward D. Cope, in his "Check List of North American Batrachia and Reptilia," Bull. U. S. Nat. Mus. No. 1.

CLASS BATRACHIA.

ORDER Anura.

SUB-ORDER RANIFORMIA.

Family RANIDÆ: Frogs.

Cran. Skel. Rana halecina halecina, Hall. Gold-striped Frog; Shad 6. Frog.

Cran. Skel. Rana palustris, Le Conte. Yellow-legged Frog; Marsh 1107. 884. Frog.

Cran. Skel. Rana pipiens (Linn.), Holbrook. Bull Frog.

SUB-ORDER FIRMISTERNIA.

Family Engystomidæ.

Cran. Skel. Engystoma carolinense, Holbrook. Chestnut-colored Frog. 1265. 93.

SUB-ORDER BUFONIFORMIA.

Family BUFONIDE: Toads.

Cran. Skel. Bufo microscaphus, Cope. Western Toad.

1541. 1401.

Cran. Skel. Bufo lentiginosus frontosus, Cope.

1532. 1531.

Cran. Skel. Bufo lentiginosus cognatus, Say.

1539. 1538.

Cran. Skel. Bufo lentiginosus americanus, Le Conte. American Toad.

Cran. Skel. Bufo lentiginosus lentiginosus, var. Latr. Red-signed 1102. Toad.

Cran. Skel. Bufo quercicus, Holbrook. Oak Toad.

1232.

SUR-ORDER ARCIFERA.

Family HYLIDÆ: Tree Toads.

Cran. Skel. Aeris gryllus gryllus (Holbrook), Gray. Cricket Frog. 167.

ORDER Urodela.

Family Plethedontidæ: Salamanders, etc.

Cran. Skel. Plethedon glutinosus, Green. Salamander.

915.

Cran. Skel. Spelerpes ruber ruber, Daudin. Red Triton.

549.

Family Amblystomidæ.

Cran. Skel. Amblystoma mavortium, Bd. Spotted Salamander.

964. \$57,

363.

Cran. Skel. Amblystoma tigrinum, Green. Axolotl.

679.

Family MENOPOMIDÆ.

Cran. Skel. Menopoma allegheniense, Harlan. Alleghany Hell-Bender.

165.

Order Trachystomata.

Family SIRENIDÆ: Sirens.

Cran. Skel. Siren lacertina, Linn. Mud Eel or Siren.

1322.

CLASS REPTILIA.

ORDER Crocodili.

Family CROCODILIDÆ.

Cran. Skel. Alligator mississippiensis, Daud. Common Alliquitor.

819,

1185.

ORDER Testudinata: Shield Reptiles.

SUB-ORDER CRYPTODIRA.

Family Chelonidæ: Sea Turtles.

Cran. Skel. Thalassochelys caonana, Linn. Hawksbill Turtle.

528,

529,

577,

675.

Cran. Skel. Chelonia mydas, Schw. Green Turtle.

530,

682,

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Family EMYDIDÆ: Tortoises.
 Cran.
        Skel. Pseudemys rugosa, Shaw. Red-bellied Terrapin.
  652,
          9.
  653,
  654,
  655.
 Cran.
        Skel. Pseudemys concinna, Le Conte.
         1252.
 Cran.
        Skel. Pseudemys scabra, Linn.
  533.
 Cran.
        Skel.
               Malacoclemmys concentrica. Terrapin.
 532.
         154.
 Cran.
        Skel. Chrysemys picta, Hern. Painted Turtle.
 534.
        1019.
 Cran.
        Skel.
               Chelopus guttatus, Schneider. Yellow-Spotted Turtle.
        172.
Cran.
        Skel. Chelopus insculptus, Le Conte. Wood Terrapin.
 533.
Cran.
        Skel. Cistudo clausa clausa, Gmelin. Common Land Turtle;
 536.
         2.
                 Box Tortoise.
 537.
                        Family CHELYDRIDÆ.
Cran.
        Skel.
               Chelydra serpentina, Linn. Snapping Turtle.
 531,
         49.
 843.
 847.
                        Family CINOSTERNIDÆ.
Cran.
       Skel.
               Cinosternum pennsylvanicum pennsylvanicum, Bosc.
 666,
         674.
                  Mud Turtle.
 667.
 668,
 669.
                       ORDER Lacertilia.
                   SUB-ORDER PLEURODONTA.
                     Family IGUANIDE: Iquanas.
Cran.
       Skel.
               Holbrookia maculata maculata, Girard. Prairie Lizard.
        684.
1004.
1005.
               Crotaphytus collaris, Say. Ring-necked or Collared Lizard.
Cran.
       Skel.
803.
        742.
               Sceloporus undulatus undulatus, Harlan. Common
Cran. Skel.
88, 89,
        86.
                 Lizard; Brown Swift.
539,
546.
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Cran. 1540.	Skel.	Sceloporus consobrinus, Bd. and Girard. Western Lizard.		
Cran. 1442.	Skel. 1104.	Sceloporus spinosus, Wiegmann. Western Spring Lizard.		
Cran. 538.		Phrynosoma cornutum, Harlan. Horned Lizard.		
Cran. 1443.	Skel. 1399.	Phrynosoma douglassii douglassii, Bell. Douglass's Horned Lizard.		
Cran.	Skel. 1534.	Phrynosoma regale, Girard. Regal Horned Lizard.		
Cran.	Skel. 1555.	Phrynosoma maccallii, Hallowell. MacCall's Horned Lizard.		
Family Helodermidæ.				
Cran.	Skel. 166.	Heloderma suspectum, Cope. Gila Monster.		
		Family Teidæ.		
Cran.	Skal	Cnemidophorus sex-lineatus, Linn. Six-lined Lizard.		
91, 92,	OACI.	Onemidophorus sez-inicatus, ninu. Dia-tiketi Lizariti.		
541,				
1542,				
1543.				
1010.		Family Scincidæ: Skinks.		
G	67. 1	-		
Cran.	Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard.		
1103.	962.	Eumeces obsoletus, Bd. and Gir. Pale Lizard.		
1103. Cran.		Eumeces obsoletus, Bd. and Gir. Pale Lizard.		
1103. Cran. 998,	962.	Eumeces obsoletus, Bd. and Gir. Pale Lizard.		
1103. Cran. 998, 999.	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink.		
1103. Cran. 998, 999. Cran.	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed		
1103. Cran. 998, 999. Cran. 876,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink.		
1103. Cran. 998, 999. Cran. 876, 1216,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed		
1103. Cran. 998, 999. Cran. 876, 1216, 1271,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed Skink.		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed Skink. Order Ophidia: Serpents.		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273, 1274.	962. Skel. Skel. 1215.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed Skink. Order Ophidia: Serpents. Sub-Order ASINEA. Family Colubridæ: Colubrine Serpents.		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273,	962. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed Skink. Order Ophidia: Serpents. Sub-Order ASINEA.		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273, 1274. Cran. 859.	962. Skel. Skel. 1215. Skel. 94.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed Skink. Order Ophidia: Serpents. Sub-Order ASINEA. Family Colubridæ: Colubrine Serpents. Carphophiops amænus, Say. Red Snake.		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273, 1274. Cran. 859. Cran.	962. Skel. Skel. 1215. Skel. 94. Skel. 1020.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed Skink. Order Ophidia: Serpents. Sub-Order ASINEA. Family Colubridæ: Colubrine Serpents. Carphophiops amænus, Say. Red Snake. Tantilla nigriceps, Kenn.		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273, 1274. Cran. 859.	962. Skel. Skel. 1215. Skel. 94. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed Skink. Order Ophidia: Serpents. Sub-Order ASINEA. Family Colubridæ: Colubrine Serpents. Carphophiops amænus, Say. Red Snake.		
1103. Cran. 998, 999. Cran. 876, 1216, 1271, 1272, 1273, 1274. Cran. 859. Cran.	962. Skel. Skel. 1215. Skel. 94. Skel. 1020. Skel.	Eumeces obsoletus, Bd. and Gir. Pale Lizard. Eumeces guttulatus, Hallowell. Spotted Lizard or Skink. Eumeces fasciatus, Linn. Striped Lizard; Blue-tailed Skink. Order Ophidia: Serpents. Sub-Order ASINEA. Family Colubridæ: Colubrine Serpents. Carphophiops amænus, Say. Red Snake. Tantilla nigriceps, Kenn.		

- Cran. Skel. Ophibolus getulus getulus (Linn.), Bd. and Grd. Thunder 701. Snake; King Snake.
- Cran. Skel. Ophibolus getulus boylii (Linn.), Bd. and Grd. Boyle's 994. Chain Snake.
- Cran. Skel. Ophibolus getulus, sayi, Holbrook. Say's Chain Snake. 1090.
- Cran. Skel. Diadophis punctatus punctatus (Linn.), Bd. and Grd. 1414. 706, Ring-necked Snake.
- Cran. Skel. Diadophis punctatus amabilis (Linn.), Bd. and Grd. 851.
- Cran. Skel. Cyclophis vernalis, De Kay. Green Snake. 548, 590.
- 1231. Cran. Skel. Coluber vulpinus, Bd. and Grd. Fox Snake. 743.
- Cran. Skel. Coluber obsoletus obsoletus (Say), Kenn. Pilot Black 1018. Snake; Racer.
- Cran. Skel. Coluber obsoletus confinis (Say), Bd. and Grd. 1087.
- Cran. Skel. Coluber guttatus, Linn. Chicken Snake. 12\$3.
- Cran. Skel. Coluber emoryi. Bd. and Grd. Emory's Snake. 1089.
- Cran. Skel. Pityophis sayi mexicanus, Dum. and Bib. Gopher Snake. 1222. 1221.
- Cran. Skel. Pityophis sayi bellona, Bd. and Grd. Bull Snake. 980. 1223,
- 1536.

 Cran. Skel. Bascanium constrictor (Linn.), Bd. and Grd. Black
 53. Snake.
- Cran. Skel. Bascanium tæniatum laterale, Hall. 1530.
- Cran. Skel. Bascanium tæniatum tæniatum, Hall. 1529.

- Cran. Skel. Bascanium flagelliforme testaceum (Say.), Bd. and Grd. 702, 982.
- Cran. Skel. Eutænia saurita (Linn.), Bd. and Girard. Ribbon Snake. 705.
- Cran. Skel. Eutænia faireyi, Bd. and Gird. Fairie's Garter Snake. 995. 1088.
- Cran. Skel. Eutænia marciana, Bd. and Gird. Marcy's Garter Snuke. 547, 84.

Cran.	Skel.	Eutænia vagrans vagrans, Bd. and Gird. Common Western
1528.	1527.	Garter Snake.
Cran.	Skel.	Eutænia sirtalis dorsalis, Bd. and Gird. Eastern Garter
1318.	85.	Snake.
Cran.	Skel.	Eutænia sirtalis ordinata (Linn.), Bd. and Gird.
1533.	1230.	
Cran.	Skel.	Eutænia sirtalis sirtalis (Linn.), Bd. and Gird.
1228,	42,	
546.	1227.	
Cran.	Skel. 911.	Eutænia sirtalis parietalis (Linu.), Say.
Cran.	Skel.	Eutænia elegans, Bd. and Gird.
	1229.	
Cran.	Skel.	Tropidonotus sipedon sipedon (Linn.), Bd. and Gird.
629.	830,	Water Snake.
	1558.	
Cran.	Skel.	Tropidonotus grahamii, Bd. and Gird. Graham's Water
-	858.	Snake.
Cran.	Skel . 598.	Tropidonotus leberis (Linn.), Bd. and Gird. Yellow- bellied Snake.
Cran.	Skel. 1214.	Tropidonotus sipedon woodhouseii (Linn.), Bd. and Gird. Woodhouse's Snake.
Cran.	Skel.	Heterodon simus nasicus, Bd. and Gird. Hog-nosed
1226.	768.	Snake; Sand Viper.
Cran.	Skel.	Heterodon platyrhinus (Lata.), Bd. and Gird. Western
	703,	Sand Viper.
	1086.	
		SUB-ORDER PROTEROGLYPHA.
		Family Elapidæ: Vipers.
Cran.	Skel.	Elaps fulvius fulvius (Linn.), Bd. and Gird. Harlequin
1319.	90.	Snake.
		SUB-ORDER SOLENOGLYPHA.
		Family Crotalidæ: Rattlesnakes, etc.
Cran.	Skel.	Crotalus horridus, Linn. Banded Rattlesnake; Northern
545, 615.		Rattlesnake.
Cran.	Skel.	Crotalus adamanteus adamanteus (Beauv.), Bd. and
	700.	Gird. Diamond Rattlesnake.
Cran.	Skel.	Crotalus adamanteus atrox (Beauv.), Bd. and Gird.

Skel. Ancistrodon contortrix, Bd. and Gird. Copper-head;

993.

Cran.

1003. Moccasin.

LIST OF CRANIA AND SKELETONS OF FOREIGN REPTILES.

CLASS REPTILIA.

ORDER Ophidia.

SUB-ORDER ASINEA.

Family Boide: Boas.

Cran. Skel. Boa constrictor, Linn. Boa.

541,

543,

544.

ORDER Lacertilia.

SUB-ORDER PLEURODONTA.

Family IGUANIDE: Iguanas.

Cran. Skel. Metapocerus cornutus, Wagler. South American Lizard. 44.

Cran. Skel. Iguana tuberculata, Wagler. Banded Iguana. 1444.

LIST OF CRANIA AND SKELETONS OF FISHES.

Note.—The classification adopted is that of Dr. Theodore Gill, in his paper "Arrangement of the Families of Fishes," Smithsonian Miscellaneous Collections, No. 247, 1872, and the nomenclature for marine forms is substantially in accordance with his "Catalogue of the Fishes of the East Coast of North America," Smithsonian Miscellaneous Collections, No. 283, 1873.

CLASS PISCES.

Sub-Class Teleostei.

ORDER Plectognathi.

SUB-ORDER GYMNODONTES.

Family Tetrodontidæ.

Cran. Skel. Chilichthys turgidus (Mitch.), Gill. Rough Puffer; Por-1413. cupine Fish; Blower.

ORDER Pediculati.

Family LOPHIDÆ.

Cran. Skel. Lophius americanus, De Kay. Goose Fish; Fishing Frog; 1156, 1164. Sea Devil. 1157.

ORDER Teleocephali.

SUB-ORDER HETEROSOMATA.

Family PLEURONECTIDÆ.

Cran. Skel. Pseudopleuronectes americanus (Walb.) Gill. Common 1153.
13. Flounder.
Cran. Skel. Chænopsetta occellaris (De Kay), Gill. Long-toothed 107. Flounder.

Cran. Skel. Hippoglossus americanus, Gill. Halibut. 152.

SUB-ORDER ANACANTHINI.

Family GADIDÆ.

Cran. Skel. Gadus morrhua, Linn. Common Codfish. 553. 111.

Cran. Skel. Microgadus tomcodus (Walb.), Gill. Tom Cod; Frost

Cran. Skel. Melanogrammus æglefinus (Linn.), Gill. Haddock. 554. 26.

Cran. Skel. Brosmius americanus, Gill. European Cusk; Polar Cod 626. Fish. Family MERLUCHDE. Merlucius bilinearis (Mitch.), Gill. American Hake. Cran. Skel. 1114. Family CRYPTACANTHIDE. Cran. Skel. Cryptacanthodes maculatus, Storer. Ghost Fish; Wry-81. mouth. SUB-ORDER ACANTHOPTERI. Family LABRIDÆ. Skel. Tautoga onitis (Linn.), Günther. Black Fish; Tautog. Cran. 576. 54. Family SCARIDÆ. Cran. Skel. Pseudocarus guacamaia (Cuv. and Val.), Günther. 812, Parrot Fish. 846. Family Scombridge. Cran. Skel. Scomber scombrus, Linn. Mackerel. 1100. 59. Skel. Orcynus secundi-dorsalis (Storer), Gill. Horse Mackerel; Cran. 1169. 1868. Tunny. 1170. Cran. Skel. Cybium maculatum (Mitch.), Cuv. Spanish Mackerel. 1092. 790. Family CARANGIDÆ. Cran. Skel. Trachynotus carolinus (Linn.), Gill. Pompano; Crevallé. 1211. Family Scienide. Cran. Skel. Cynoscion carolinensis (Cuv. and Val.), Gill. Salmon 1190. 1146. Trout; Spotted Sea Trout. Cran. Skel. Cynoscion regalis (Bloch), Gill. Squeteague; Weak Fish; 556. 105, Gray Trout. 110. Cran. Skel. Pogonias chromis, Lacep. Drum. 120. 1096. Cran. Skel. Liostomus xanthurus, Lacep. Yellow Tail; Spot. 878, 877, 886, 885. 887. Sciænops ocellatus (Linn.), Gill. Red Bass; Bass; Sea Cran. Skel. 559. 142. Bass; Red Fish, Ocellated Drum. Menticirrus nebulosus (Mitch.), Gill. King Fish; Whit-Cran. Skel. 1149. 1145, inq.

1154.

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Micropogon undulatus (Linn.), Cuv. and Val. Croaker;
Cran.
       Skel.
1147.
        1044.
                 Hick Fish.
                          Family Sparidæ.
               Archosargus probatocephalus (Walb.), Gill. Sheephead.
Cran.
        Skel.
574.
         61.
Cran.
       Skel.
               Stenotomus argyrops (Linn.), Gill. Scup; Porgy.
1202,
        1201,
1203,
        1212.
1204.
                         Family SERRANIDÆ.
Cran.
        Skel.
               Centropristes atrarius (Linn.). Black Sea Bass.
 575.
         11.
                           Family Percidæ.
Cran.
        Skel.
                Perca flavescens (Mitch.). Yellow Perch.
 568,
         24.
 863.
Cran.
        Skel.
                Stizostedion americanum, Girard. Pike Perch.
        148.
        Skel.
                Percina caprodes (Raf.), Girard. Hog Fish.
Cran.
        170.
Cran.
        Skel.
               Boleosoma fuciforme, Girard. Darter.
          74.
                          Family LABRACIDÆ.
        Skel.
                Morone americana (Gmelin), Gill.
                                                  White Perch.
Cran.
 558.
         23.
                Roccus lineatus (Bl. Schu.), Gill.
                                                  Striped Bass; Rock
Cran.
        Skel.
  43.
          3.
                  Fish.
                        Family Centrarchidæ.
               Lepomis auritus, Gill. Long-eared Sunfish.
Cran.
        Skel.
 860.
 865.
                Pomotis aureus, Gill. Common Sunfish; Pumpkin-seed;
        Skel.
Cran.
                  Tobacco-box.
               Enneacanthus obesus, Gill. Mottled Sunfish.
Cran.
        Skel.
1150.
        817.
               Hyperistius carolinensis, Gill. Black Spotted Sunfish.
       Skel.
Cran.
        823.
               Micropternus salmoides (Lac.), Gill.
        Skel.
                                                        Small-mouthed
Cran.
                  Black Bass; Black Bass.
        147.
               Micropterus floridanus (Les.), Gill. Oswego Bass.
Cran.
        Skel.
        1142.
                         Family EPHIPPIIDE.
Cran.
        Skel.
               Parephippus gigas, Gill. Moon Fish.
850.
         68.
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Family Pomatomidæ.

Cran. Skel. Pomatomus saltatrix (Linn.), Gill. Mackerel; Skip-Jack. 67, 63.

555,

1158.

Family Echineididæ.

Skel. Leptecheneis naucrateoides (Zuiew.), Gill. Sucker. 71.

SUB-ORDER PERCESOCES.

Family ATHERINIDE.

Cran. Skel. Chirostoma notata (Mitch.), Gill. Silver-sides. 882.

SUB-ORDER SYNENTOGNATHI.

Family BELONIDÆ.

Cran. Belone longirostris (Mitch.), Gill. Silver Gar; Bill Fish. Skel.

562. 55.

Family Scomberesocidæ.

Cran. Skel. Exocœtus exiliens, Gmelin. Flying Fish. 1054.

SUB-ORDER HAPLOMI.

Family Esocidæ.

Cran. Skel. Esox reticulatus, Lesueur. Pickerel.

557. 16.

Esox lucius, Linn. Lake Pike; Mascalunge. Cran. Skel.

609. 146.

Family Cyprinodontidæ.

Cran. Skel. Fundulus heteroclitus (Linn.), Gill. Mummichog.

1133. 880.

Skel. Fundulus bairdii, Agass. Baird's Stone-tugger. Cran. 103.

Cran. Skel. Hydrargyra majalis (Walb.), Val. Mummichoq.

881.

SUB-ORDER ISOSPONDYLI.

Family Microstomide.

Cran. Skel. Osmerus mordax (Mitch.), Gill.

1064.

Family SALMONIDÆ.

Cran. Salmo fontinalis, Mitch. Brook Trout. Skel.

571. 58.

Cran. Skel. Salmo confinis, De Kay. Lake Trout.

1288. 144.

Cran. Skel. Coregonus albus, Les. White Fish. 131.

4

Family Elopidæ.

Cran. Skel. Megalops thrissoides (Bl. Sch.), Günther. Jew Fish; 1140. Tarpum.

Family CLUPEIDÆ.

Cran. Skel. Alosa sapidissima (Wilson), Storer. Shad.

570. 36.

Cran. Skel. Pomolobus pseudoharengus (Wilson), Gill. Herring;

1070, 1078. Alewife.

1071,

1072,

1073.

Family Dorosomidæ.

Cran. Skel. Dorosoma cepediana (Lac.), Gill. Toothed Herring.

567. 108.

SUB-ORDER EVENTOGNATHI.

Family CATOSTOMIDÆ.

Cran. Skel. Hylomyzon nigricans, Agassiz. Black Sucker.

572. 57.

Cran. Skel. Catostomus teres, Lesueur. Chub; Sucker.

662, 659.

663,

664,

665.

Cran. Skel. Moxostoma oblonga, Agassiz. Horned Sucker.

807. 806.

Family CYPRINIDE.

Cran. Skel. Carassius auratus, Bleaker. Goldfish.

569. 28,

630.

Cran. Skel. Semotilus pulchellus, Gill. Chub.

573.

Cran. Skel. Semotilus rhotheus, Cope. Fall Fish; Swamp Carp.

866. 585.

Cran. Skel. Hybognathus regius, Girard. Gudgeon; River Smelt.

560. 75.

Cran. Skel. Hypsilepis cornutus, Mitch. Red-fin.

864. 168.

Cran. Skel. Hybopsis hudsonius, Clinton.

879.

Cran. Skel. Ceratichthys biguttatus, Kirtland. Horned Chub.

588. 592.

Cran. Skel. Stilbe americana, Linn. Minnow; Shiner.

Cran. Skel. Luxilus kentuckiensis, Gill. Gold-striped Dace. 73.

Exoglossum maxillingua, Lesueur. Tonquejaw. Cran. Skel. 587.

ORDER Nematognathi.

Family SILURIDÆ.

Amiurus nigricans, Lesueur. Lake Catfish; Black Cat-Skel. 563. 21. fish. 564.

1095.

1105.

Cran. Skel. Rhamdia brachypterus (Cope), Gill. Mexican Catfish. 51.

Cran. Skel. Amiurus atrarius, DeKay. Black Catfish. 1143.

ORDER Apodes.

SUB-ORDER ENCHELYCEPHALI.

Family Anguilling.

Anguilla bostoniensis (Les.), DeKay. Common Eel. Cran. Skel. 1094, 25,

Sub-Class Ganoidei.

SUPER-ORDER HYOGANOIDEI.

ORDER Rhomboganoidei.

Family LEPIDOSTEIDÆ.

Lepidosteus osseus, Lac. Common Gar Fish. Cran. Skel. 565, 62. 566.

SUPER-ORDER CHONDROGANOIDÆ.

Order Chondrostei.

Family ACIPENSERIDÆ.

Cran. Skel. Acipenser oxyrhynchus, Mitch. Sharp-nosed Sturgeon. 971. 1152.

Sub-Class Elasmobranchii.

SUPER-ORDER PLAGIOSTOMI.

ORDER Raise.

SUB-ORDER MASTICURA.

Family TRYGONIDÆ.

Trygon centrura (Mitch.), Gill. Sting Ray; Stingaree Cran. Skel. 1174. 1165.

SUB-ORDER PACHYURA.

Family RAIAIDE.

Cran. Skel. Raia undulata, Lacep. Whip-tailed Ray. 874.

Cran. Skel. Raia lævis, Mitch. Sharp-nosed Skate.

Family PRISTIDÆ.

Cran. Skel. Pristis antiquorum (Linn.), Lath. Saw Fish.

1015,

1063, 1135.

ORDER Squali.

SUB-ORDER GALEI.

Family Odontaspididæ.

Cran. Skel. Eugomphodus littoralis, Gill. Sand Shark; Shovel-nose. 1171. 1166.

Family GALEORHINIDÆ.

Cran. Skel. Eulamia milbertii (Müll. and Henle), Gill. Blue Shark. 673,

1269.

Cran. Skel. Eulamia obscurus (Lesueur), Gill. Dusky Shark.

1172, 1262.

Cran. Skel. Galeocerdo tigrinus, Müll. and Henle. Tiger Shark. 1052.

Cran. Skel. Mustela canis (Mitch.), DeKay. Smooth Dogfish. 1167.

Family Spinacidæ.

Cran. Skel. Squalus americanus (Storer), Gill. Dogfish; Dog Shark. 1155.

